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EXAMINER	
BROWN JR, NATHAN H	

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/649,936	HAYASHI ET AL.	
	Examiner	Art Unit	
	Nathan H. Brown, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *(3)* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-128* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *70 and 95-127* is/are allowed.

6)☒ Claim(s) *29-69,71-94, and 128* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Examiner's Detailed Office Action

1. This Office Action is responsive to the communication for application 10/649936, filed April 3, 2006.

2. The claims are objected to under 37 CFR 1.75(d) as not finding support in the specification for the word "physical". Applicant is required to amend the specification to use the same words and phrases as set forth in the claims. Applicant is encouraged to define the phrase "physical structure" when making such amendment.

3. Claims 29-128 have been re-examined.

4. Claim 79 is objected to because of the following informalities: "a grouping the segments" should be --a grouping of the segments--. Appropriate correction is required.

5. Claim 59 is objected to because of the following informalities: "Claim..." appears at the end of the claim and is either the start of a truncated sentence or a typo. Examiner assumes typo and eliminates it below. Appropriate correction is required.

6. Applicant's 112,1 arguments with respect to claims 29-128 have been considered and are found to be persuasive. The 35 USC 112,1 rejections with respect to claims 29-128 are withdrawn.

7. Applicant's arguments with respect to claims 29-62 and 128 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 29-36, 38-61 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 29 is considered to be directed toward an algorithm. Claim 29 claims "a design method executable on a computer" and lists the steps the method is comprised of. Clearly, a method directed toward an algorithm is not practical by "physical transformation or reduction of an article to a different state or thing". To be statutory, the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" requires that such a method provide "a practical application that produces a useful, tangible and concrete result". To be useful, the method

"must satisfy the utility requirement of section 101", i.e., the method must be "(i) specific, (ii) substantial and (ii) credible". Claim 29 satisfies conditions (i)-(iii) by being directed to parametric search by genetic algorithm, which is well know to practitioners of artificial intelligence and optimization, and may be considered useful. The next question is whether claim 29 provides a concrete result, i.e., whether the result is "substantially repeatable". Since claim 29 lists a set of steps in a procedure it defines an algorithm (an unambiguous finite procedure). Unambiguous finite procedures are inherently substantially repeatable, thus claim 29 may be considered to provide a concrete result. Finally, claim 29 must also provide a tangible real world result. The result of following the method is "a new outline delineating a new shape of the physical structure". A physical structure is considered to be broad enough to include structures that cannot exist in the real 3-dimensional world. Therefore, claim 29 is considered to cover statutory as well as nonstatutory subject matter and thus covers an abstract concept. Claims 30-36 and 38-61 do not correct this deficiency.

10. Claims 62-69 and 71-74 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 62 claims a "computer-implemented genetic design apparatus" which essentially repeats the steps of claim 29. Examiner asserts that the invention of the claim is a software apparatus comprised of a plurality of software units which may be implemented to run on a computer. Claim 62 simply lists the units of the apparatus which, in itself, does not satisfy the requirements of providing "a practical application that produces a useful, tangible and concrete result" as

the result is the same as that of claim 29. Claims 63-69 and 71-94 do not cure the deficiency of claim 62.

11. Claim 128 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 128 claims a "computer-readable medium encoded with processing instructions for executing a genetic design method", i.e., the method of claim 29. While the "computer-readable medium" is a tangible article of manufacture, it itself does not produce the result of the "encoded with processing instructions". Since we have shown that the method of claim 29 and the software apparatus of claim 62 do not produce a tangible real-world result. It is considered that the "computer-readable medium encoded with processing instructions" of the method of claim 29 will not produce a tangible real-world result. Thus claim 128 may also be deemed non-statutory.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 29-35, 38, 40, 44-61, and 128 are rejected under 35 U.S.C. 102(b) as being anticipated by *Bentley et al.*, "Conceptual Evolutionary Design by a Genetic Algorithm", 1996.

Regarding claims 29 and 128. (Currently Amended) *Bentley et al.* describe a genetic design method executable on a computer comprising:

selecting a parent profile representing an outline for designs the outline delineating a shape of a physical structure (*see* pp. 3-4, §4.1, *Examiner interprets "a number of non-overlapping primitive" to be a profile.*);

dividing the parent profile into segments, each of the segments having at least one dimensional characteristic (*see* pp. 3-5, §4.1 and §4.2, *Examiner interprets "primitive" to be a segment consisting of "nine definition parameters to specify its 3D position, width, height, depth, and orientation of its clipping plane.", i.e. the segment consist of nine numeric parameters: x, y, z, w, h, d, A, B, C, where A, B, and C are coordinates for the vector normal to the clipping plane.*);

selecting at least one segment of the divided segments (*see* p. 9, "Using a single primitive of the representation, a variety of differently oriented prisms were successfully evolved, with highly accurate designs being produced every time, fig. 8.");

modifying the at least one dimensional characteristic of the selected at least one segment (*see* p. 9, Fig. 8, *Examiner interprets the rotational differences between the two prisms shown in the figure to be due to modifying at least one dimensional characteristic of the selected primitive (segment).*);

and evolving the parent profile using a genetic algorithm to produce an offspring profile, including evolving the modified at least one dimensional characteristic of the selected at least one segment (*see* pp. 8-10, §5.3, *Examiner notes that each prism type is based on a variation of at least one parameter of a primitive (e.g., A).*), the offspring profile representing a new outline for the design the new outline delineating a new shape of the physical structure (*see* pp. 8-10, §5.3, *Examiner notes that each prism type delineates a shape of a possible physical structure.). (Examiner further notes that the capability to select, display, and edit some subset of a set of designs and design primitives is inherent in any design system.*)

Regarding claim 30. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein the segments of the profiles represent curves and lines of contours of externally visible components of the structure (*see* p. 3, Fig. 1, *Examiner notes that a primitive represents curves and lines of contours in the 2D approximation.*).

Regarding claim 31. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein at least one of the profiles includes at least one dimensional characteristic pertaining to the overall profile (*see* p. 6, Fig. 3, *Examiner notes that orientation of the clipping plane is a characteristic pertaining to the input and output light characteristics of the 2-D prism design.*).

Regarding claim 32. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein at least one of the profiles includes different levels of detail (*see* p. 5, col. 1, lines 11-14, *Examiner notes that orientation of the clipping plane is a different level of detail than the prism position.*).

Regarding claim 33. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein at least one of the profiles includes a grouping of the segments that represents a component of the structure (*see* p. 8, Fig. 7, *Examiner notes that each prism design consists of two primitives which represent component prisms in a multi-prism design.*).

Regarding claim 34. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein at least one of the profiles includes a grouping of the segments that represents a component of the structure, the grouping including at least one dimensional characteristic pertaining to the grouping (*see* p. 9, Fig. 10, *Examiner notes that each prism design in the set has a grouping of segments which include a depth (as they are all 3-D).*).

Regarding claim 35. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein at least one of the profiles includes at least two groupings of the segments that respectively represent at least two components of the structure, the profile including a relational parameter pertaining to a relationship between the at least two groupings (*see* p. 10, Fig. 12, *Examiner notes that each prism*

design in the set has a grouping of two segments which represent two component prisms having a relational parameter of equal angles of refraction.).

Regarding claim 38. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising displaying at least one of the profiles (*see* p. 9, col. 1, lines 1-8).

Regarding claim 40. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising displaying the grouping (*see* p. 10, Figs. 12-13, *Examiner notes that each prism design in the figures has a grouping of multiple segments.*).

Regarding claim 44. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising modifying the at least one dimensional characteristic for at least one of the segments (*see* p. 9, Fig. 8, "Using a single primitive of the representation, a variety of differently oriented prisms were successfully evolved,...".).

Regarding claim 45. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising modifying the at least one dimensional characteristic pertaining to the overall profile (*see* p. 10, col. 1, §*RHOMBOID PRISM*

Fig. 12, "...parameters specifying depth and position on the Z-axis were simply initialized[sic] with a set value instead of a random value,...", *Examiner notes that depth pertains to whether the overall profile is 2-D or 3-D.*).

Regarding claim 46. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising modifying at least one of the profiles to identify a grouping the segments that represents a component of the structure (*see* p. 9, col. 2, §*DEROTATING PRISMS*, Fig. 11, *Examiner assumes that the claim means: modifying at least one of the profiles to identify a grouping --of-- segments that represents a component of the structure, i.e., evolving new components (i.e., identifying a new grouping of segments) by evolving the design. Examiner notes that in evolving the profile of a derotating prism to turn an image upside down, the GA was able to exploit a loop-hole in the design specification and satisfy the requirement by generating a ('cheat') segment grouping forming an unusual 'K' prism component (Fig. 11 (top)) to turn the image upside down.*).

Regarding claim 47. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising: modifying at least one of the profiles to identify a grouping of the segments that represents a component of the structure (*see* above); and specifying at least one dimensional characteristic pertaining to the grouping (*Examiner asserts that modifying at least one of the profiles inherently forces a modification of at least one dimensional characteristic pertaining to the*

grouping of segments since a profile consists of segments (see above) which contain dimensional (e.g. height) information.).

Regarding claim 48. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising modifying the dimensional characteristic pertaining to the grouping (*see* p. 4, col. 1, §4.2, "By fixing all parameters specifying depth, two-dimensional designs can be created in addition to three dimensional designs.", *Examiner asserts that the depth of each segment is a characteristic pertaining to the grouping of segments (i.e., whether the grouping is 2-D or 3-D).*).

Regarding claim 49. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising: modifying at least one of the profiles to identify at least two groupings of the segments that respectively represent at least two components of the structure (*see* p. 11, §5.4, Figs. 14-15, *Examiner notes that the GA evolved the profile of randomly positioned right-angle prisms (Fig. 14) into an abbe prism and a porro prism (Fig. 15) which are capable of being combined into various optical structures.*); and specifying a relational parameter pertaining to a relationship between the at least two groupings (*see* p. 11, Fig. 14, §5.4, *Examiner asserts that relative position is a relational parameter pertaining to a relationship between the at least two groupings.*).

Regarding claim 50. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising modifying the relational parameter pertaining to the relationship between the at least two groupings (*see* above).

Regarding claim 51. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, further comprising modifying the relationship between the at least two segments (*see* p. 6, col. 1-2, *MODULE 3: UNFRAGMENTED,* "This criterion is implemented as a soft constraint, with fragmented designs being penalised very heavily."

Examiner asserts that fragmentation is a relationship between at least two segments, which is modified by the GA to avoid design penalty.).

Regarding claim 52. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein said evolving isolates at least one of the segments of the parent profile from variation (*see* p. 4, col. 1, §4.2, "By fixing all parameters specifying depth, two-dimensional designs can be created...").

Regarding claim 53. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein said evolving isolates the at least one dimensional characteristic pertaining to the overall profile from variation (*see* above).

Regarding claim 54. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein the grouping is part of the parent profile (*Examiner notes that a parent profile can have more than one segment and thus a grouping (see figures).*), and wherein said evolving isolates the grouping from variation (*Examiner asserts that since depth parameters can be fixed to restrict variation of a design to two dimensions (see above), all of the segment groupings in a design can be isolated from variation in a third or higher dimension.*)

Regarding claim 55. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein said evolving evolves only the segments selected by a user (*see* p. 4, col. 1, §4.2, *Examiner notes that all executions of the GA involve a user selected starting profile which consists, therefore, of user selected segments.*).

Regarding claim 56. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein the parent profile includes at least two groupings of the segments that respectively represent at least two components of the structure (*see* p. 11, col. 1, §5.4, Fig. 14, *Examiner interprets all prisms in the starting profile to be components.*), and wherein said evolving evolves only the segments of the grouping selected by the user (*see* above).

Regarding claim 57. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein the grouping is part of the parent profile (*Examiner notes that a grouping of segments is inherently part of any profile.*), and wherein said evolving evolves the at least one dimensional characteristic pertaining to the grouping (*see* p. 11, col. 1, §5.4, "No genes are fixed, allowing the system to determine not only the positions of the components, but also optimize the components themselves if required.", *Examiner notes that allowing the system to determine positions of the components involves evolving at least one dimensional characteristic (e.g., x) pertaining to the grouping of segments representing prisms.*).

Regarding claim 58. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in claim 35, wherein the at least two groupings are part of the parent profile (*see* above), and wherein said evolving evolves the relational parameter pertaining to the relationship between the at least two groupings (*see* above).

Regarding claim 59. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein the relationship between the at least two segments is part of the parent profile (*Examiner asserts that if a parent profile contains at least two segments, it contains at least two normals for clipping planes—one for each segment—it therefore contains a relationship between at least two segments.*), and wherein said evolving evolves the relationship between the at least two segments (*Examiner asserts that if evolving varies the normal of the clipping planes of either segment, evolving evolves a relationship between at least two segments.*).

Regarding claim 60. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein said evolving accounts for a user preference to keep at least one of the segments (*see* p. 5, col. 2, *MODULE 1: LIMITS UPON SIZE, Examiner notes that evolution under the user preferred, 'soft constraint' of limits upon size, keeps both segments in Fig. 2 while varying their size.*).

Regarding claim 61. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein said evolving accounts for a user preference to keep the grouping (*see* p. 5, col. 2, *MODULE 1: LIMITS UPON SIZE, Examiner notes that evolution under the user preferred, 'soft constraint' of limits upon size, keeps the segment grouping in Fig. 2 while varying its size.*).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bentley et al.* in view of *Jones et al.*, "Development and Validation of a Genetic Algorithm for Flexible Docking", 1997.

Regarding claims 36. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim, wherein at least one of the profiles includes a relationship between at least two of the segments. *Bentley et al.* do not describe the relationship including a radius parameter. However, *Jones et al.* do describe the relationship including a radius parameter (*see* p. 739, para. "Initialisation[sic] of the protein and of the ligand"). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Bentley et al.* with *Jones et al.* to specify component position constraints simply.

16. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bentley et al.* in view of *Renner*, "Geometric Optimization with Genetic Algorithms", 1998.

Regarding claim 37. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim. *Bentley et al.* do not describe profiles of an automobile. However, *Renner* describes optimization of an automobile body using a genetic design method (*see* last para.). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to use the variant of

constructive solid geometry described in *Bentley et al.* to perform automobile body optimization with genetic algorithms as *Renner* describes for the purpose of handling the complex goal functions with realistic effort (*see* abstract).

17. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bentley et al.* in view of *Faccenda et al.*, "A Combined Simulation/Optimization Approach To Process Plant Design", 1992.

Regarding claim 39. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim. *Bentley et al.* do not describe displaying at least one of the profiles at one of the different levels of detail. However, *Faccenda et al.* do describe displaying at least one of the profiles at one of the different levels of detail (*see* p. 1260, col. 2, last para.). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Bentley et al.* and *Faccenda et al.* to provide visual representation of profiles at different levels of detail for the purpose of determining if the optimal solution is valid for the combination (*see* p. 1260, §5.3, first para.).

18. Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bentley et al.* in view of *Bedwell et al.*, "Artificial Evolution of Algebraic Surfaces", 1999.

Regarding claim 41. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim. *Bentley et al.* do not describe generating a family tree identifying successive generations of the parent and offspring profiles. However, *Bedwell et al.* do describe generating a family tree identifying successive generations of the parent and offspring profiles (*see* §3.2, col. 1, para. 2, Fig. 3-2). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Bentley et al.* with *Bedwell et al.* to provide visual representation of generations of profiles so that the user does not have to have any prior understanding of the underlying technique (*see* Abstract).

Regarding claim 42. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim. However, *Bentley et al.* do not describe generating a family tree identifying successive generations of the parent and offspring profiles; and displaying the parent profile, the offspring profile, and the family tree. *Bedwell et al.* do describe generating a family tree identifying successive generations of the parent and offspring profiles; and displaying the parent profile, the offspring profile, and the family tree (*see* above). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Bentley et al.* with *Bedwell et al.* to provide visual representation of generations of profiles so that the user doesn't have to have any prior understanding of the underlying technique.

19. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bentley et al.* in view of *Rowland et al.*, "Evolutionary Co-operative Design Between Human and Computer: Implementation of 'The Genetic Sculpture Park'.", 2000.

Regarding claim 43. (Previously Presented) *Bentley et al.* describe a genetic design method as claimed in the parent claim. *Bentley et al.* do not describe displaying at least one of the profiles as a three-dimensional image. However, *Rowland et al.* do describe displaying at least one of the profiles as a three-dimensional image (*see*, p. 76, col. 1, §2.1, Fig. 3). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Bentley et al.* with *Rowland et al.* to provide a 3-D visual representation of profiles in order to view a design from different angles.

Applicant's arguments with respect to claims 29 and 128 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

20. The following is a statement of reasons for the indication of allowable subject matter: Claim 95 has been amended, adding functional detail, which indicates the allowability of claims 95-127.

The following is an examiner's statement of reasons for allowance: The amendments of claim 95 have added functional detail not disclosed in the best prior art for the

application: *Bentley et al.*, *Faccenda et al.*, *Bedwell et al.*, and *Rowland et al.*, or other prior art that could be applied: *Arci et al.* (USPN 5,761,381), *Koza et al.* (USPN 5,867,397), and *Shackleford et al.* (USPN 5,970,487). Particularly, none of the above references disclose a computer-implemented graphical user interface comprising: an icon for selecting at least one segment of the divided segments and an icon for evolving the parent profile.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Knight
Supervisory Patent Examiner
Tech Center 2100

Nathan H. Brown, Jr.
June 24, 2006

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